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Atilla Uz

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EXAMINER

CORMIER, DAVID G

ART UNIT

PAPER NUMBER

1711

NOTIFICATION DATE

DELIVERY MODE

09/22/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@vclmlaw.com

Office Action Summary	Application No. 10/598,785	Applicant(s) UZ ET AL.	
	Examiner DAVID CORMIER	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

1. This Office action is responsive to the amendment filed on 29 March 2011. Claims 1, and 7-20 are pending. Claims 1 and 7-20 have been amended.
2. The objections to Claims 7, 9-17 are withdrawn in response to Applicant's amendments.
3. The rejections of Claims 1, 7-10, 12-15, and 17-19 under 35 U.S.C. 112, second paragraph, as being indefinite are withdrawn in response to Applicant's amendments. The rejections of Claims 11, 16, and 20 remain as the indefiniteness issues persist.
4. Claims 1, 9-11, 14-16, 19, 20 were rejected under 35 U.S.C. 102(a and e) as being anticipated by Bashark (US 2005/0005952). Applicant argues that Bashark does not disclose a circulation pump with a variable rpm. The Examiner respectfully disagrees. The pump may be turned on or off so it would have a variable rpm as it starts and stop. Further note that Bashark discusses an embodiment where the pump motor speed is measured, for example at paragraph 24, indicating it can vary in speed. Applicant also argues that Bashark is used differently than the invention; however, this is unpersuasive as Bashark meets the claimed structure and function of the apparatus. In the case of the method steps, Bashark may be relied upon for performing the same manipulative steps as claimed even if the outcome varies from what is claimed.
5. Claims 7, 8, 12, 13, 17, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over combinations of Bashark, Strocchio (EP 0838192), Schob (US 2003/0103852), and Hegeman et al. (US 2003/0019510). Applicant asserts that the examiner has not met any evidentiary burden, but makes no specific arguments against any of the rejections. Applicant

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further argues that Bashark does not teach claim 1; however, Bashark meets the structure and function of claim 1.

6. In response to Applicant's amendments, new/modified ground(s) of rejection are presented below.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 7, 12, and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 7, 12, and 17 recite the phrase "method...selected from the group consisting of...making n start-up attempts in a positive rotation direction...and making n start-up attempts in a negative rotation direction" However, there does not appear to be original support for performing either positive rotations or negative rotations. The specification (paragraph 13) provides for making n start-up attempts in a positive direction and if no success is achieved, making n start-up rotations in a negative direction. There does not appear to be any evidence

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that it was contemplated at the time of the invention to only make n start-up rotations in a positive or negative direction.

10. Claims 8, 13, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 8, 13, and 18 recite the phrase “gradually increasing current (I) until the current exceeds a certain limit value (I_{max}).” However, there does not appear to be original support for only increasing current until the current exceeds I_{max} . Rather, the specification (paragraph 14) only indicates that the current exceeds I_{max} . There is no discussion that the current is only increased until it exceeds I_{max} . Further regarding Claims 8, 13, and 18, the phrase “gradually increasing current...to determine whether the viscosity of the washing water has increased according to the current (I) amount” is not originally supported. There does not appear to be any support for increasing current to determine if the viscosity has increased. Rather, the specification appears to indicate that current is increased in response to meet increasing load, and a determination is made that it is not suitable is made as current exceeds I_{max} (paragraph 14). Further regarding Claims 8, 13, and 18, there does not appear to be original support for determining the viscosity is increased when the current exceeds I_{max} and to operate the pump at low rpm in response. Rather, the specification appears to indicate that exceeding I_{max} only indicates that water is not suitable and needs to be replaced (paragraphs 14 and 15).

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11. Claims 9 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 9 and 14 recite that it is detected/determined that current "fluctuates within a current limit proper range of I_{min} to I_{max} ." However, the specification only provides for detecting the current fluctuates within a proper range (paragraph 16). Figure 4 shows a current fluctuating about a current of I_{nom} , and being within an I_{min} and I_{max} , but does not specify whether the I_{min} and I_{max} define the proper range. I_{min} and I_{max} are used to mean different things elsewhere in the specification than the proper range for detecting partial filter clogging, so there does not appear to be adequate support for claiming that the range of I_{min} to I_{max} is the proper range for detecting partial filter clogging. The proper range could be some other range, such as a range defined as a percent deviation from I_{nom} .

12. Claims 10, 15, and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 10, 15, and 19 recite that current fluctuations are lowered to a "preset level near the nominal current." However, the specification only provides for lowering the current fluctuations to a preset level (paragraph 19). There is no indication that the preset level is the same as the earlier referenced nominal current (paragraph 18). The drawings do not show

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any lowering of the fluctuation at all, so lowering to a preset level near the nominal current is new matter.

13. Claims 11 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 11 and 16 recite "detecting a decreasing change of the current (I), with small or no network fluctuations, drawn by the circulation pump." However, the specification provides for detecting a decreasing change of the current (I) drawn by the circulation pump with respect to nominal current (paragraph 20). There is no original support for the current needing small or no network fluctuations.

14. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 20 recites "if it is determined that the drawn current (I) does not return to nominal current (I_{nom}).\" However, the specification provides for determining if the current does not return to normal, not nominal (paragraph 21). There is no original support for the normal current being the same as the nominal current. A normal current can mean a current at nominal, within some bounds of nominal, or some other current allowing the machine to operate normally.

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15. Claims 10, 11, 14-16, 19, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

16. Regarding Claim 14, the phrase “when it is detected by the control card comprising the steps” is indefinite because it is unclear what “it” refers to. It appears “it” may refer to current fluctuations of the method, so is interpreted as such. Clarification or amendment is required.

17. Regarding Claims 10, and 15, the phrase “has high amplitude fluctuations with, decreasing the rpm of the circulation pump” is indefinite. It is unclear because there appears to be missing language after the word “with.” Claims 10, 15 and 19 are further unclear because high amplitude fluctuations is a relative term, and one of ordinary skill would not be able to determine what size fluctuation would constitute a “high amplitude fluctuation.”

18. Regarding Claims 10, 15, and 19, it is unclear how lowering the current fluctuations to a preset level can prevent foam if the foam is detected when the current fluctuations are already decreased with respect to nominal current.

19. Regarding Claims 11, 16, it is unclear what current would be a normal current.

20. Regarding Claims 11, 16, and 20, the phrase “detecting a decreasing change of the current (I)” is indefinite because it is unclear what is a decreasing change of current. It is unclear if the change in current is a change in current from some nominal current, waveform amplitude, average dc current, slope or some other quantity. It is unclear if the “with small or no network fluctuations” is the decreasing change of current.

Claim Rejections - 35 USC § 102

21. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

22. Claim 1 is rejected under 35 U.S.C. 102(a and e) as being anticipated by Bashark (US 2005/0005952).

23. Bashark discloses a dishwasher comprising a wash tub (10) in which the dishes to be washed are placed, a sump (11) which is in the lower section of the wash tub, where the water present in the wash tub is collected during washing operation, a circulation pump (12), driven by an electric motor with variable rpm, turning the water in the sump back to the wash tub, a drain pump (16) which drains the water collected in the sump at the end of the washing operation out of the dishwasher and a filter (14) preventing the dirt from getting into the circulation during washing and thus decreasing the effectiveness of washing, and a control card, tracing the change of the current drawn by the circulation pump from a network (the control card is taken to be the controller 25 in combination with sensor circuit 50; Figures 3-8 show different embodiments of the sensor circuit).

24. The phrase “for determining rotor blocking...washing performance negatively” is considered to be intended use of the apparatus. The claimed intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

25. Claim 11, as best as it is understood, is rejected under 35 U.S.C. 102(a and e) as being anticipated by Bashark (US 2005/0005952).

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26. Bashark is relied upon as above. Bashark discloses detecting a decreasing change drawn by the circulation pump from the network with respect to nominal (Bashark teaches that the current from the pump is detected at paragraph 22), taking some water into the dishwasher sump (reads on any of the liquid fill steps; see paragraphs 25-28), and lowering the rpm of the pump and continuing with the normal washing operation level (reads on deactivating circulation pump and reactivating it in a subsequent sub fill cycle; see paragraph 28). The phrase “if it is determined...and draining the water of Claims 11, 16, and 20 is conditional and is not given patentable weight because it is not necessary for anticipation (note Bashark does not disclose a condition where the current does not return to normal). Further note for these claims that these steps can be used on all wash or rinse circulation sub-cycles (paragraph 28).

Claim Rejections - 35 USC § 103

27. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

28. **Claims 7, 9, 12, 14, 17, and additionally Claims 16 and 20 as best as they are understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US 2005/0005952) in view of Strocchio (EP 0 838 192; cited by Applicant).**

29. Regarding Claims 9, 14, 16, and 20, Bashark is relied upon as applied to claims 1 and 11. Bashark teaches detecting current drawn by the circulation pump from the network reaches an Imin to detect a liquid starvation episode (Bashark teaches that the current from the pump is detected at paragraph 22), taking some water into the sump (reads on any of the liquid fill steps; see paragraphs 25-28), lowering the rpm of the circulation pump and continuing with the

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washing operation (reads on deactivating circulation pump and reactivating it in a subsequent sub fill cycle; see paragraph 28), but does not expressly disclose detecting that the current fluctuates within I_{max} as well.

30. Strocco discloses a dishwasher control method that detects a current to the pump motor, if a maximum absorption (of current) occurs indicating a jammed motor (col. 1, lines 46-68; col. 3, lines 4-57), a prealarm phase is initiated in which up to 10 attempts are made to drive the motor before an alarm condition is raised (col. 3, lines 34-39). In between the attempts, the motor can be reversed to facilitate release of the jam (col. 3, lines 40-47).

31. Because it is known in the art to also monitor if current exceeds an I_{max} , and the results of the modification would be predictable, namely, detecting normal operation of the pump, it would have been obvious to one of ordinary skill in the art at the time of the invention to have detect the current fluctuates within a current limit proper range of I_{min} to I_{max} .

32. Regarding Claims 7, 12, and 17, Bashark in view of Strocco is relied upon as above, but does not expressly disclose the control card comprises a method used when the current drawn by the circulation pump from the network suddenly exceeds a limit current value or motor stops completely, comprising the steps of, with the start-up current enabling the circulation pump to shift from inoperative position to operative position: selected from the group consisting of making start up attempts of a previously specified number in the positive rotation direction and making n start up attempts in the positive rotation directing by increasing the torque with a current higher than the start up current, and making n start up attempts in the negative rotation direction with the start up current and making n start up attempts in the negative rotation

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direction with the start up current and making n start up attempts in the negative rotation direction by increasing the torque with a current higher than the start up current.

33. As discussed above, Strocco discloses a dishwasher control method that detects a current to the pump motor, if a maximum absorption (of current) occurs indicating a jammed motor (col. 1, lines 46-68; col. 3, lines 4-57), a prealarm phase is initiated in which up to 10 attempts are made to drive the motor before an alarm condition is raised (col. 3, lines 34-39). In between the attempts, the motor can be reversed to facilitate release of the jam (col. 3, lines 40-47).

34. Because it is known in the art to monitor a pump motor for a current maximum and in response, attempt to drive the motor in a forward and reverse direction, and the results of the modification would be predictable, namely, an effective means of releasing a jam, it would have been obvious to one of ordinary skill in the art at the time of the invention to have n start up attempts in a positive direction and n start up attempts in a reverse direction upon detection of a large current. Note that n start up attempts could be 0 or 1 start up attempt. Further note that it is implied that a higher torque with a higher current would be used because the motor is jammed; nevertheless, one of skill in the art would recognize that if the pump is jammed increasing the torque and current could facilitate removal of the jam.

35. **Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US 2005/0005952), in view of Schob (US 2003/0103852), and further in view of Hegeman et al. (US 2003/0019510; cited by Applicant).**

36. Bashark is relied upon as above.

37. Bashark does not expressly disclose a control method for deciding that the washing water is not suitable comprising the steps of gradually increasing current exceeds a certain limit current

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value letting the circulation pump continue its operation at low rpm after it is decided that the viscosity of the washing water is increased, draining the washing water and taking clean water if it is decided that the washing water is not suitable according to the variation of the current amount.

38. Schob discloses a dispensing apparatus having a rotary pump (3) driven by a motor (paragraph 49). The motor current is directly a measure of the torque of the rotor (31) driven by the motor (paragraph 49). There is a direct connection between the motor current with which the pump is driven and the viscosity of the fluid (paragraph 52).

39. Hegeman discloses a dishwasher which uses a turbidity sensor (200) for measuring a soil level in the water (paragraph 28), if the sensor output decreases, the water is pumped out of the dishwasher and a second fill operation is performed (paragraph 30). If the output signal from the sensor decreases rapidly during circulation, heavy soil is present and a corrective action of draining and pumping water onto the filter can be initiated (paragraph 31-32).

40. Because it is known in the art to drain washing water and adding new water when excess soil present, as taught by Hegeman, and that one way of detecting an increased viscosity (or unsuitable water; note that one of skill in the art would recognize that viscosity would be positively related to amount of soil) would be to monitor an increase in a torque of a motor, and the results of the modification would be predictable, namely, an effective means of discarding excessively dirty water, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a control method for deciding that the washing water is not suitable comprising the steps of gradually increasing current exceeds a certain limit current value letting the circulation pump continue its operation at low rpm after it is decided that the viscosity of the

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washing water is increased, draining the washing water and taking clean water if it is decided that the washing water is not suitable according to the variation of the current amount.

41. **Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US 2005/0005952), in view of Strocchio (EP 0 838 192; cited by Applicant), in view of Schob (US 2003/0103852), and further in view of Hegeman et al. (US 2003/0019510; cited by Applicant).**

42. Bashark in view of Strocchio is relied upon as above, but does not expressly disclose a control method for deciding that the washing water is not suitable comprising the steps of gradually increasing current exceeds a certain limit current value letting the circulation pump continue its operation at low rpm after it is decided that the viscosity of the washing water is increased, draining the washing water and taking clean water if it is decided that the washing water is not suitable according to the variation of the current amount.

43. Schob discloses a dispensing apparatus having a rotary pump (3) driven by a motor (paragraph 49). The motor current is directly a measure of the torque of the rotor (31) driven by the motor (paragraph 49). There is a direct connection between the motor current with which the pump is driven and the viscosity of the fluid (paragraph 52).

44. Hegeman discloses a dishwasher which uses a turbidity sensor (200) for measuring a soil level in the water (paragraph 28), if the sensor output decreases, the water is pumped out of the dishwasher and a second fill operation is performed (paragraph 30). If the output signal from the sensor decreases rapidly during circulation, heavy soil is present and a corrective action of draining and pumping water onto the filter can be initiated (paragraph 31-32).

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45. Because it is known in the art to drain washing water and adding new water when excess soil present, as taught by Hegeman, and that one way of detecting an increased viscosity (or unsuitable water; note that one of skill in the art would recognize that viscosity would be positively related to amount of soil) would be to monitor an increase in a torque of a motor, and the results of the modification would be predictable, namely, an effective means of discarding excessively dirty water, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a control method for deciding that the washing water is not suitable comprising the steps of gradually increasing current exceeds a certain limit current value letting the circulation pump continue its operation at low rpm after it is decided that the viscosity of the washing water is increased, draining the washing water and taking clean water if it is decided that the washing water is not suitable according to the variation of the current amount.

46. **Claim 10, as best as it is understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US 2005/0005952) in view of Sagou (JP 2005-000511).**

47. Bashark is relied upon as above, and further indicates that the liquid starvation episode causing pump motor current to fall to a predetermined level may be caused by aeration due to detergent sudsing action (paragraphs 22 and 30), but does not expressly disclose decreasing the rpm of the circulation pump to lower the current fluctuations to a preset level near the nominal current to provide the foam remains above the sucking level of the circulation pump in the sump.

48. Sagou discloses a dishwasher in which a foam detector detects an increase in foam in the washing tank (2) and controls the drive of the pump motor (7) to rotate at low speed for a predetermined time period (abstract). When the pump is operated at a lowered speed the

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foaming phenomena may be suppressed (see Figures 1, 3; machine translation paragraphs, 18-22).

49. Because it is known in the art to have lower the rotation speed of a circulation pump in a dishwasher upon detection of foam, and the results of the modification would be predictable, namely, an effective means of suppressing the foaming phenomena, it would have been obvious to one of ordinary skill in the art at the time of the invention to lower the pump motor speed until the pump is again operating in a normal state, such as one in which the current has gone back to its nominal value, yielding a dishwasher method for decreasing the rpm of the circulation pump to lower the current fluctuations to a preset level near the nominal current to provide the foam remains above the sucking level of the circulation pump in the sump.

50. **Claims 15 and 19, as best as they are understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bashark (US 2005/0005952), in view of Strocchio (EP 0 838 192; cited by Applicant), and further in view of Sagou (JP 2005-000511).**

51. Bashark in view of Strocchio is relied upon as above, and further indicates that the liquid starvation episode causing pump motor current to fall to a predetermined level may be caused by aeration due to detergent sudsing action (paragraphs 22 and 30), but does not expressly disclose decreasing the rpm of the circulation pump to lower the current fluctuations to a preset level near the nominal current to provide the foam remains above the sucking level of the circulation pump in the sump.

52. Sagou discloses a dishwasher in which a foam detector detects an increase in foam in the washing tank (2) and controls the drive of the pump motor (7) to rotate at low speed for a predetermined time period (abstract). When the pump is operated at a lowered speed the

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foaming phenomena may be suppressed (see Figures 1, 3; machine translation paragraphs, 18-22).

53. Because it is known in the art to have lower the rotation speed of a circulation pump in a dishwasher upon detection of foam, and the results of the modification would be predictable, namely, an effective means of suppressing the foaming phenomena, it would have been obvious to one of ordinary skill in the art at the time of the invention to lower the pump motor speed until the pump is again operating in a normal state, such as one in which the current has gone back to its nominal value, yielding a dishwasher method for decreasing the rpm of the circulation pump to lower the current fluctuations to a preset level near the nominal current to provide the foam remains above the sucking level of the circulation pump in the sump.

Conclusion

54. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID CORMIER whose telephone number is (571)270-7386. The examiner can normally be reached on Monday - Thursday 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art Unit
1711

DGC
David Cormier
9/13/2011